



Why Risk a Production Stoppage?

If a worn conveyor belt fails, your production line stops until a new one can be obtained. Such a delay is serious in any production line, particularly so in the case of canners, packers and food processors. An entire "pack" could be ruined.

The best insurance against such trouble is a replacement belt on hand and ready. Such a belt will pay for itself over and over again. Order one today.

Complete manufacturing and service facilities to fill your order promptly and efficiently

Listed below are approximately 90 cities in all parts of the United States in which one or more experienced Cyclone salesmen are located. You will find these salesmen courteous, capable and highly interested in serving you. Just check through the list below. You're almost certain to find a Cyclone branch office near you.

CYCLONE FENCE DEPARTMENT

AMERICAN STEEL & WIRE DIVISION-UNITED STATES STEEL CORPORATION General Offices, WAUKEGAN, ILLINOIS

Sales Offices:

ALBANY, N. Y. 167 Chestnut Street Phone: CEntral 4-6715

ATLANTA, GA. 2387 Peachtree Rd., N.W. Phone: Exchange 8532

AUSTIN, TEXAS P. O. Box 554 Litchfield Bldg. Phone: GR eenwood 8-5135

BAKERSFIELD, CALIF. 730 Chester Ave. Phone: FA irview 3-9262

BALTIMORE 2, MD. Court Square Bldg. Phone: LE xington 9-8221

BATAVIA, ILL. P. O. BOX 304 Phone: 1723 WX

BATON ROUGE, LA. 8240 Florida Ave. Box 2281 Phone: WAlnut 1-5641

BEAUMONT, TEXAS 4975 Port Arthur Road Phone: 5-2501

BERWYN, ILLINOIS 1212 So. Oak Park Ave. Phone: Bl shop 2-2514

BIRMINGHAM, ALA. 1121 N. 24th St. Phone: AL pine 2-3327

BLOOMINGTON, ILL. 429 Main St. Phone 4-8705

BOSTON, MASS. 360 Eastern Ave. (Malden 48, Mass.) Phone: MA Iden 4-2600

BUFFALO 7, N. Y. 1807 Elmwood Ave. Phone: Bedford 1741

300 Broadway Phone: WO odlawn 3-3130

CHARLESTON 2, W. VA. 714½ Lee Street
P. O. Box 162
Phone: DI ckens 4-4521

CHARLOTTE 4, N. C. 1415 No. Independence Blvd. Phone: ED ison 3-8696

CHATTANOOGA, TENN. 4013 Tennessee Ave. Phone: TA ylor 1-2831

CHICAGO, ILLINOIS (90) P. O. Box 636 Phone: SH eldrake 3-8040

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2107½ Santee Ave. Phone: 2-0423

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DAYTON, OHIO 132 N. Main St. HEmlock 5661

DETROIT 7, MICH. 1925 E. Hancock Ave. Phone: TE mple 2-2001

EUGENE, ORE. 115 E. 11th St. Phone: 3-7113

FLINT, MICH. Phone: CE dar 2-7182

FT. WORTH 1. TEXAS 1316 East Lancaster Phone: EDison 5-4371

FRESNO, CALIF. 850 "R" Street Phone: AD ams 7-8054

GALESBURG, ILL. 216 Hill Arcade Phone: 6208-6

GALVESTON, TEXAS **Buccaneer Hotel Bldg.** Phone: 5-5037

GRAND RAPIDS 2, MICH. 154 Louis St., N.W. Phone: GL endale 6-8191

GREEN BAY, WIS. 230 N. Madison St. Phone: HE mlock 7-4752

HAMMOND, IND. 5305 Hohman Ave. Phone: WE stmore 2-8866

HARRISBURG, PA. 221 N. Second St. Phone: CE dar 4-4120 HARTFORD, CONN.

119 Ann Street Phone: CH apel 9-6835

HOUSTON 5, TEXAS 6513 Main Street Phone: JA ckson 3-1613 INDIANAPOLIS, 4, IND. 4740 No. Keystone Ave Phone: CL ifford 1-0087

JACKSON 115, MISS. 117 Woodrow Wilson Ave. Phone: 3-6881

JACKSONVILLE 2, FLA. 118 East Bay St. Phone: EL gin 6-3224

KANSAS CITY 10, MO. P. O. Box 526 (1401 Fairfax Trafficway, KC, K.) Phone: AT water 1-1902

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LOS ANGELES, CALIF. 820 Thompson Avenue (Glendale 5, Calif.) Phone: CH apman 5-2635 LOUISVILLE, KY. Rm. 212 Builder's Bldg. Phone: JU niper 3-0408

LUBBOCK, TEXAS Phone: PO rter 3-4770 MEMPHIS, TENN. 1957 Poplar Phone: BRoadway 2-1032

MIAMI, FLA. 2925 N. W. 42nd Ave. Le Jeunne Road Phone: NE wton 5-4585 MILWAUKEE 2, WISC.

733 N. Van Buren St. Phone: BR oadway 2-2606 MINEOLA, L. I., N. Y. 476 Jericho Turnpike Phones: Pl oneer 6-5854 Pl oneer 6-1863

MINNEAPOLIS, MINN. Rm. 1362 W. 1st Nat'l Bk. Bldg. Phone: 8-CA pitol 2-5861 MOBILE, ALABAMA 410 St. Francis St. Phone: HE mlock 2-4126

NASHVILLE, TENN. 904 Main St. Phone: 3-4890

NEWARK 5, N. J. 796 Frelinghuysen Ave. Phone: Blgelow 8-2600 Direct N. Y. WO rth 2-7740 NEW ORLEANS, LA.

4930 Washington Ave. P. O. Box 1031 Phone: Audubon 6612 N. Y. C. 17, N. Y.

370 Lexington Ave., Rm. 908 Phone: LE xington 2-9646 NORFOLK, VA. 218 Flatiron Bldg. Phone: MA dison 2-4296

OAKLAND 8, CALIF. 954 60th Street Phone: OL ympic 2-2060 OKLAHOMA CITY, OKLA.

1007 W. Grand Ave. Phone: RE gent 9-2679 OMAHA, NEBR. P. O. Box 542

Rm. 744 Brandeis Theatre Bldg. Phone: Jackson 7315 PHILADELPHIA, PA.

Eagle and Hillcrest Rd. (Havertown, Dela. Co., Pa.) Phone: GR anite 2-7454

PHOENIX, ARIZ. 4814 N. Central Ave. Phone: AM hurst 6-1694 PITTSBURGH 13, PA. 4767 Baum Blvd. Phone: MU 2-2460

PORTLAND, ME. 142 High Street Phone: SP ruce 5-0302

PORTLAND 14, ORE. 400 N. E. 11th Ave. Phone: BE Imont 2-8105

PROVIDENCE 3, R. I. 420 Industrial Trust Bldg. Phone: JA ckson 1-6884

RALEIGH, N. C. P. O. Box 6507 1804 Oberlin Road Phone: TE mple 2-0804 RICHMOND 20, VA.

110 N. 8th Phone: RI chmond 2-1910 RIVERSIDE, CALIF. 3485 Orange St. Phone: OV erland 3-4717

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ST. LOUIS 17, MO. 6780 Southwest Ave. MI ssion 5-8017

ST. PAUL 1, MINN. Rm. 1362 W. 1st Nat'l Bk. Bldg. Phone: CA pitol 2-5861 SALT LAKE CITY, UTAH 3206 So. Main St. Phone: HU nter 4-6321

SAN ANTONIO, TEXAS 2015 West Ave.

Phone: PErshing 4-5141 SAN DIEGO 1, CALIF. 517 Harbor Insurance Bldg. Phone: BE Imont 3-3738

SAN FRANCISCO 24, CALIF. 440 Bayshore Blvd. Phone: VA lencia 4-1575 SAN JOSE, CALIF.

460 Park Avenue Phone: CY press 5-3310 SAVANNAH, GA. P. O. Box 1458 Phone: ADams 4-8871

SEATTLE 9, WASH. 1150 Fairview Ave., N. Phone: Main 8164 SHREVEPORT, LA. 4506 Mansfield Road P. O. Box 862

Phone: 6-3601 SOUTH BEND, IND. 102 Lafayette Bldg. Phone: CE ntral 4-5179

SPOKANE 4, WASH. South 125 Stevens Phone: MA dison 4-0421

SPRINGFIELD, MASS. 1537 Main St. Phone: REpublic 9-1896

TACOMA, WASH. 911½ Pacific Ave. Phone: Market 4551

TAMPA, FLA. 311 Morgan St. Phone: 24-5421 **TOLEDO 40. OHIO** 663 Spitzer Bldg. Phone: CH erry 4-0556

TULSA 3, OKLAHOMA 1250 So. Harvard Phone: MA dison 6-5155

WASHINGTON, D. C. 565 Jefferson Davis Hgwy. (Arlington, Va.) Phone: OT is 4-7992 WAUKEGAN, ILLINOIS

P. O. Box 260
Foss Park Ave., North Chicago
Phone: DE xter 6-1180 WHITE PLAINS, N. Y.

150 Main Street Phone: WH ite Plains 9-8409 WICHITA, KANSAS 1516 East First St. Phone: AM herst 2-7081

WILMINGTON, DELA. Suite M-217, Delaware Tru Phone: OL ympia 2-2142

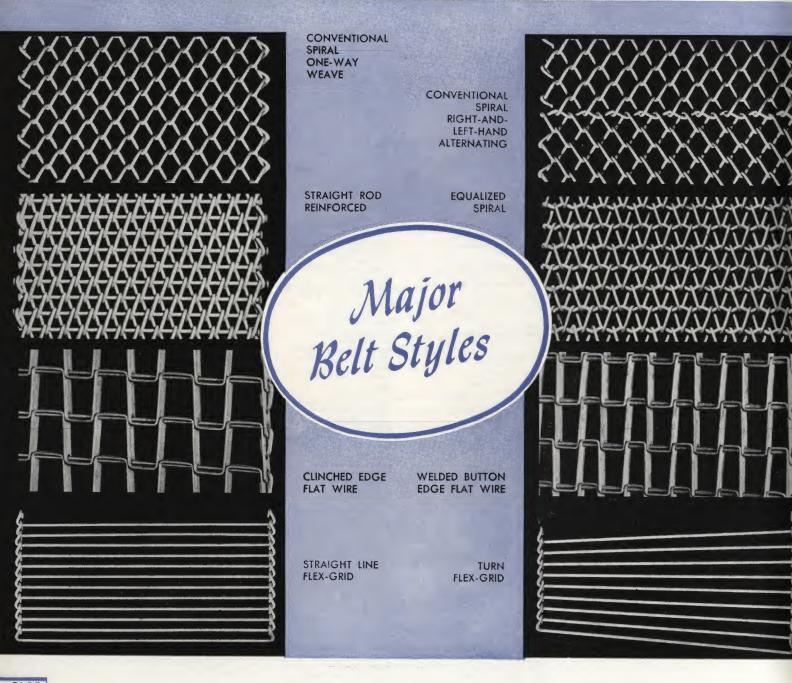
WORCESTER, MASS. Rm. 327 at 29 Pearl St. P. O. Box 908 Phone: PL easant 3-1756

WHY SO MANY PLANTS NOW USE METAL CONVEYOR BELTS



METAL conveyor belts save labor, increase production, reduce costs tremendously. They are ideal for a surprisingly wide variety of processes and products. They provide an efficient, economical means of continuous product processing and conveying.

Because Cyclone metal belts are relatively unaffected by heat, steam, water, changes in temperature or any of the usual causes of conveyor belt trouble, these belts overcome many of the mechanical and chemical obstacles that make rubber, canvas, or leather belts impractical for so many industriés.



APPLICATIONS

Cyclone Metal Belts have proved practical for:

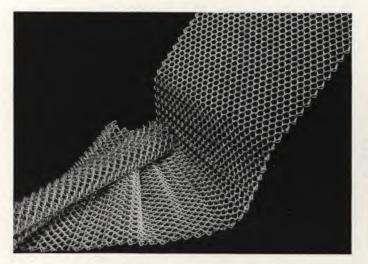
Acid and Alkali Baths Bakery Uses Blanching Brazing and Soldering Cement Bagging and Handling Chemical Treating Confectionery Uses Cooking Cooling Degreasing, Washing, Drying Felt and Pads General Package Conveying Glass Annealing and Decorating Grading and Sorting Heat Treating, Drawing, Sintering High Temperature Processing

Infra-Red Drying **Insulating Materials** (Asbestos, Spun Glass, Rock Wool) Leather and Fabric Finishing Meat Processing Pasteurizing and Sterilizing Pigment Drying Printing and Lithographing Processing Sea Food, Fruit, Vegetables Quenching and Draining Quick Freezing Rubber Processing Soap Chip Drying Tile, Siding, Shingles Veneer Drying Water Intake Screens

Additional uses are being found constantly

DISTINCTIVE FEATURES

FLEXIBLE: Spiral weave produces maximum flexibility lengthwise and at the same time makes the belt rigid crosswise. The extreme flexibility of spiral woven belts permits their use over pulleys of minimum diameters.

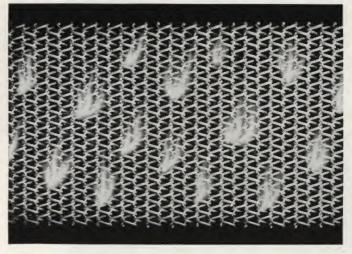


POROUS: The open meshes permit immediate, constant drainage plus complete circulation of air or heat. These belts are produced in a variety of mesh openings and gauges of wire to meet your particular requirements.

SANITARY: Cleanliness is paramount in producing Food Products and in handling many other materials. Metal Conveyor Belts cannot contaminate and can usually be kept clean by brushing, immersion, hot water or steam.

IMMERSIBLE: The operating reliability of Cyclone Metal Conveyor Belts in water, oils or chemicals is not injured by immersion. This important advantage permits the belt to be used in conveying materials or products into and out of a liquid bath or through a liquid spray, steam or compressed air jet.

TEMPERATURE RESISTANT: Various metals or alloys are available to withstand a wide range of temperatures from sub-zero freezing to heat up to 2100° Fahrenheit.



METALS AND ALLOYS: Cyclone Conveyor Belts can be fabricated from any ductile metal. Carbon, alloy and stainless steel are the most commonly used.

CYCLONE SPIRAL WEAVE CONSTRUCTIONS





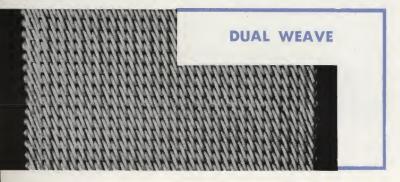
ONE WAY WEAVE



ALTERNATING SECTIONS (Crimped Connector Wires)

PROPER LENGTH FOR ALTERNATING SECTIONS

The lengths of Alternate Right-and-Left-Hand sections are determined by the amount of belt in contact with the head and tail pulleys. To obtain the best results in eliminating



The One-Way Weave Belt is so named because the spiral twist or loops of the mesh all incline in the same angular direction. They thus form surface ribs diagonally in one direction across the belt. This type of belt has a tendency to creep to one side in the direction of these diagonals, as it passes around the drum.

Where narrow belts are used, it is sometimes possible to prevent this creeping movement by guiding the belt and providing flanges on the pulleys or drums. As wider belts are used, the amount of creep becomes extreme and such methods will not suffice.

Right-and-left Alternating Weave Belt is so woven that a section of Right Hand direction spirals is joined to and followed by the same length section of Left Hand direction spirals. This regular alternation continues throughout the entire length of the belt.

If the belt should creep while the Right Hand direction spirals are passing over the driving pulley, it is automatically compensated when the Left-Hand direction spirals pass over pulley or drum. Result is that the belt travels in a true, straight line. Alternating sections are connected by means of sturdy wire rods to form a continuous completely flexible belt.

Most standard meshes can be connected by crimped wires, which seat the alternating sections perfectly. Some small or special meshes may require the use of straight-wire connectors. This crimped construction has now become standard with Cyclone wherever it can possibly be used. Illustration shows clearly how closely the crimped connector wires line up alternating sections.

When side driving chains are used with wire mesh belts, side creep is impossible and Right and Left Alternating sections are not usually required. Furnished in knuckled and welded selvage.

side creep, there should be at least two alternating sections of the belt in contact with each pulley. The length of each alternating section should not be greater than three fourths of the diameter of the smallest pulley.

The Dual Weave Belt is actually two single weave belts interwoven into one belt. It provides a minimum mesh opening and smooth carrying surface plus high tensile strength. The weight of metal is increased and open area decreased. It is most efficient for carrying small materials and such products as dough or plastics on which an open mesh fabric could leave undesirable marks. Dual Weave can be furnished in Right-and-Left Hand Alternating sections.

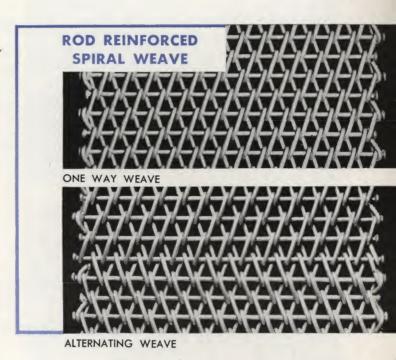
The Rod-Reinforced Spiral Woven Belt can be furnished in One-Way Weave or with Right-and-Left-Hand alternating sections. Straight reinforcing rods are inserted between the interlocking spirals at their point of contact. This divides each diamond-shaped opening into two triangles and provides a very strong belt under heat and extreme loads. The selvage edge of the belt may be either knuckled or welded. Belts of this construction are often used for heat treating and brazing applications.

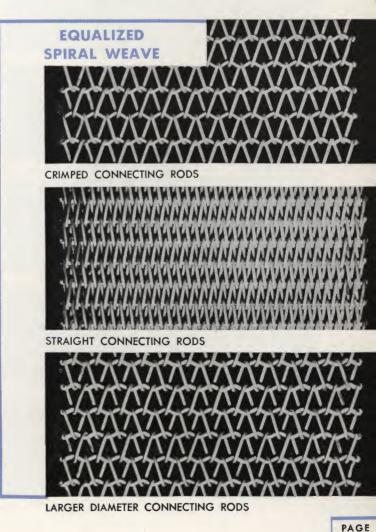
Equalized Spiral Weave is an assembly of single, alternating right-and-left hand spirals joined together by crimped connecting rods. (In some very small meshes straight connecting rods are used—see next lower illustration.)

Since the alternating right-and-left-hand spirals equalize belt traction, lateral creep is held to a minimum. Crimped rods hold each spiral in position, permitting ample flexibility and forming a construction of great strength. Connecting rods are often of larger diameter for durability when greater strength is required. Narrowing of the belt under usage strain is practically eliminated and longitudinal stretch is held at a minimum.

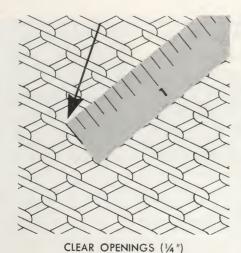
Welded edges are furnished as standard. Other special edges can be provided if necessary.

Because of the many mesh and wire sizes in which Equalized Belts can be furnished, they lend themselves to an extremely wide range of uses. From large, finished products down to small light intricate parts, you can depend on Cyclone Equalized Spiral Belts to perform varied processing and handling operations efficiently and economically.



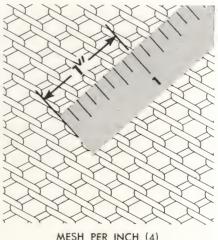




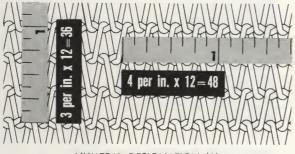


CONVENTIONAL SPIRAL

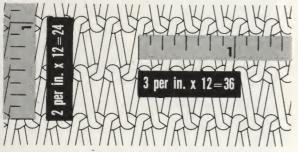
Clear opening is measured from inside edge to inside edge of adjacent parallel wires as illustrated at the left. In some cases it may be desirable to specify meshes per inch rather than clear openings. This indicates the number of openings per lineal inch as illustrated at the right. 8-mesh and smaller must be specified only in "Mesh per Inch".



MESH PER INCH (4)



NUMERAL DESIGNATION (3)



NUMERAL DESIGNATION (4)

EQUALIZED SPIRAL

All equalized designs are designated by a 3 or 4 numeral specification which indicates both mesh and wire sizes.

3-Numeral Designation

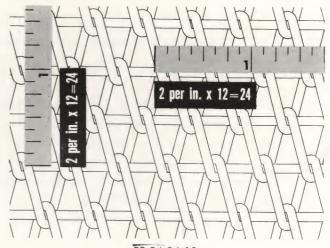
A simple example is 48-36-16. The first figure is the number of mesh openings per foot of belt width (4 per inch \times 12 = 48). The second figure is the number of cross connecting wires per foot of belt length (3 per inch \times 12 = 36). The last figure is the wire gauge of both spirals and cross connectors (in this example—No. 16).

4-Numeral Designation

A simple example is 36-24-12-14. The first figure is the number of mesh openings per foot of belt width (3 per inch \times 12 = 36). The second figure is the number of cross connecting wires per foot of belt length (2 per inch \times 12 = 24). The third numeral is the wire gauge of the cross connectors only (in this example-No. 12). The fourth numeral is the wire gauge of the spirals only (in this example—No. 14).

ROD REINFORCED SPIRAL

All Rod-Reinforced Weave designs are designated by letters "RR", followed by a 3-numeral specification. A simple example is RR-24-24-12. The first figure is the number of mesh openings per foot of belt width (2 per inch \times 12 = 24). The second figure is number of cross connecting rods per foot of belt length (2 per inch \times 12 = 24). The last figure is the wire gauge of both spirals and cross connectors (in this example—No. 12).



RR-24-24-12

CONVENTIONAL ONE-WAY WEAVE

Weave separate spiral wire through ends of belt. Knuckle or weld ends of wire.



Insert rod (straight or crimped) through ends of belt at point at right-and-left alternation. Knuckle or weld ends of rod.

DUAL WEAVE

Weave two spiral wires into one another and through the ends of belt. Weld ends of spiral wires.

EQUALIZED SPIRAL

Insert rod (crimped or straight) through ends of belt, engaging right-and-left hand spirals. Weld or knuckle ends of rod.

ROD REINFORCED SPIRAL

Weave separate spiral wire through ends of belt. Insert straight rods between interlocking spirals. Weld or knuckle ends of wire and rods.

FLEX-GRID BELT

Spread selvage knuckle slightly on open end of belt. Engage opposite ends. Bend knuckle back to original position.

FLAT WIRE BELT

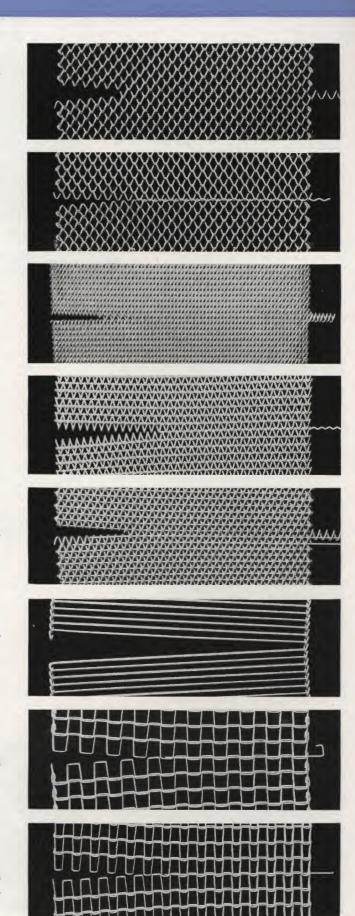
(Clinched Selvage)

Bring ends of belt together and join same by inserting extra cross rod furnished. Clinch ends through holes provided.

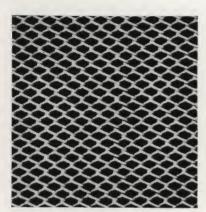
FLAT WIRE BELT

(Welded Button Edge)

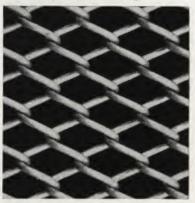
Bring ends of belt together and join same by inserting extra threaded rod furnished. Turn nut to flat strip and cut off any excess threads.



A FEW STANDARD MESHES FOR ONE WAY AND ALTERNATING WEAVES



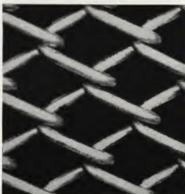
³/₂-in. opening, No. 19—Approx. wt. per sq. ft., 1.37 lbs.—thickness ⁵/₂-in.



1/4-in. openings, No. 16—Approx. wt. per sq. ft., 1.30 lbs.—thickness 1/2-in.



3/8-in. opening, No. 14—Approx. wt. per sq. ft.,1.23 lb.—thickness 3/6-in.



1/2-in. opening, No. 11—Approx. wt. per sq. ft., 2,46 lbs.—thickness 15/2-in.





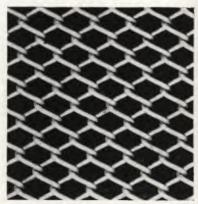
1/8-in. opening, No. 18—Approx. wt. per sq. ft., 1.25 lbs.—thickness 3/6-in.

	TABLES CLEAR OPENING	35
Opening in	Wire Gauge	Wt. in Lbs. Per
Inches	(A.S.&W.)	Sq. Foot (Steel)
3/32		.91
	119	1.37
1/9		.88
	18	1.25
	[18	.87
3/16		1.04
	16	1.54
	(14	2.50
	[18	.66
14		.92
	16	1.30
	14	2.34
	(16	.72
3/8		1.23
	12	2.01
	11	2.81
	16	.64
	1.4	.98
1/2		1.74
	11	2.46
	10	3,25
	12	1.08
34		1.44
	[10	1.88
	111	1.06
1		1.33
	9	1.67
	6	3.08

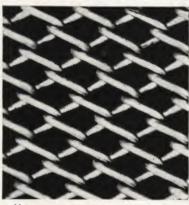
T/	BLES-MESH PER IN	СН
Number of	Wire Gauge	Wt. in Lbs. Per
Meshes Per Inch	(A.S.&W.)	Sq. Foot (Steel)
8		,94
	20	1.14
7		.91
	119	1.37
6		.95
	18	1.40
	(19	.88
5	{18	1.25
	17	1.80
	(18	.87
4		1.04
	16	1.54
	114	2,50
	18	.90
31/2	17	1.05
	16	1.40
	[14	2.29
	18	.66
3	17	.92
	16	1.30
	(14	2.34



 $\frac{3}{4}$ -in. opening, No. 9—Approx. wt. per sq. ft., 2.25 lbs.—thickness $\frac{19}{2}$ -in.



3/16-in. opening, No. 16—Approx. wt. per sq.



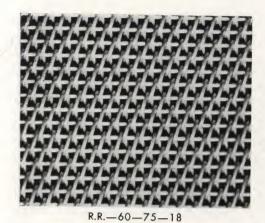
1/4-in. opening, No. 14—Approx. wt. per sq. ft. 2,34 lbs.—thickness 5/6-in.

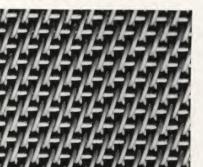


3/8-in. opening, No. 12—Approx. wt. per sq. ft., 2.01 lbs.—thickness 7/6-in.

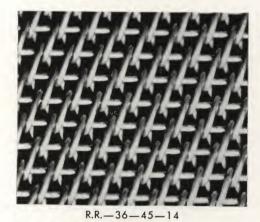


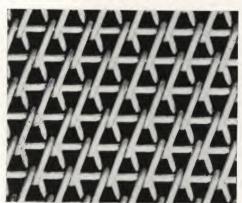
1-in. opening, No. 6—Approx. wt. per sq. ft., 3.08 lbs.—thickness ¾-in.





R.R.-48-68-16



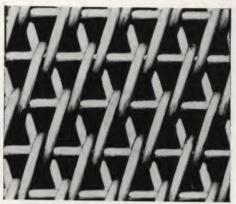


R.R.-30-35-14

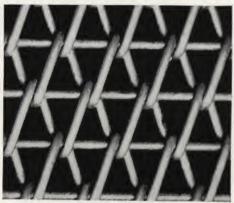
SPECIFICATIONS

This type of belt is widely used in processing operations requiring high heat. It is an exceptionally strong belt and shows minimum elongation and width contraction under high temperature use. Its record for straight belt travel is also excellent. Its outstanding performance under temperatures also recommends its use in "cold" operations where minimum elongation and high strength are desirable. It can be furnished in any suitable steel analysis.

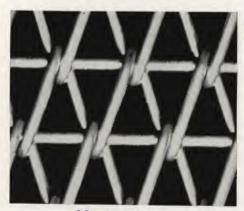
	Approx.	W/-	Wt. in
Mesh Designation	Open. in Inches	Wire Gauge	Lbs. Per Sq. Ft.
RR-74-81-20	3/32	20	1.75
60-75-18		18	2.25
48-68-16	3/16	16	3.00
47-47-18		18	1.50
45-54-16		16	2.80
42-48-14	3/16	14	3.75
36-51-16	1/4	16	2.30
36-45-14	1/4	14	4.10
31-35-14	5/16	14	3.00
31-28-16	5/16	16	1.50
28-30-14	3/8	14	2.75
26-28-12	3/8	12	4.00
24-25-14	$\frac{7}{16}$	14	2.40
24-24-12	7/16	12	3.45
22-21-14	$\frac{1}{2}$	14	2.00
23-22-12	$\frac{1}{2}$	12	3.10
22-23-11	$\frac{1}{2}$	11	4.20
21-24-10	1/2	10	5.40
20-20-14	9/16	14	1.80
20-20-12	9/16	12	2.71
20-25-10	9/16	10	5.30
18-18-12	5/8	12	2.12
18-17-11	5/8	11	3.28
18-17-10	5/8	10	3.90
15-13-14	$\frac{3}{4}$	14	1.35
15-13-12	$\frac{3}{4}$	12	1.95
15-13-11	$\frac{3}{4}$	11	2.48
15-13-10	$\frac{3}{4}$	10	3.20
12-11-11	1	11	2.15
12-11-10	1	10	2.50
12-12- 9	1	9 -	3.05



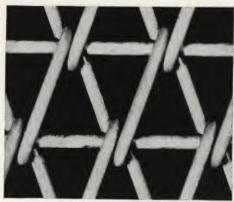
R.R.—24—24—12



R.R.—18—17—11



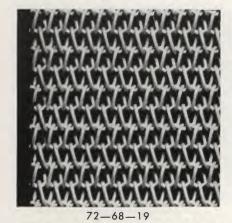
R.R.-15-13-10



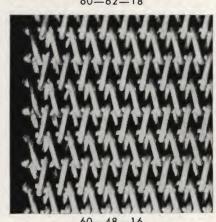
R.R.-12-12-9

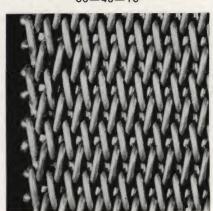
TYPICAL MESHES OF EQUALIZED SPIRAL WEAVE





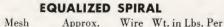




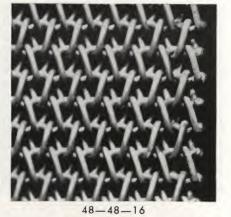


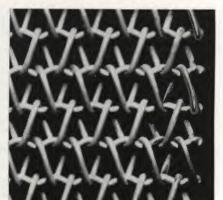
59-38-14

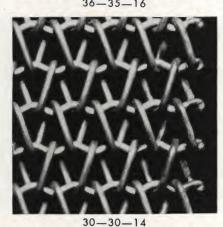
This style of belt is fast becoming the most widely used type of spiral woven belt. Its alternating right-and-left-hand weave at each mesh eliminates all tendency of the belt to creep to either side on drive pulleys. The cross wires at each mesh effectively equalize operating stresses and prevent them from growing into localized distorting and destructive strains. The cross connector wires also assure minimum belt elongation and width contraction. Equalized Belt can be woven in a wide variety of wire gauge sizes with openings as fine or coarse as desired. Edge junctions of the spiral and cross wires are always solidly and smoothly welded.

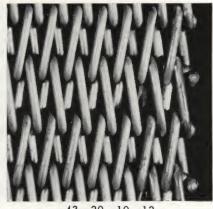


	Mesh	Approx.		Wt. in Lbs. I
	esignations	Mesh per In.	Gauge	_
E-	-96-85-21	8	21	1.00
	84-83-21	7	21	1.00
	84-83-20	7	20	1.13
	72-68-20	6	20	.94
	72-68-19	6	19	1.34
	72-68-18	6	18	1.89
	72-56-16	6	16	3.30
	72-24-16	6	16	2.35
	60-62-18	5	18	1.61
	60-55-16	5	16	2.69
	60-48-16	5	16	2.75
	59-38-14	5	14	4.21
	48-51-16	4	16	2.50
	48-48-16	4	16	2.25
	48-47-14	4	14	4.25
	42-43-16	$3\frac{1}{2}$	16	1.94
	42-37-18	$3\frac{1}{2}$	18	1.03
	42-28-14	$3\frac{1}{2}$	14	2.75
	43-20-10-	$-12 \ 3\frac{1}{2}$	10&12	5.25
	36-41-14	3	14	3.00
	36-35-16	3	16	1.50
	36-24-16	3	16	1.45
	36-24-14	3	14	1.80
	36-31-18	3	18	.84
	36-19-12	3	12	3.80
	36-20-11-	-12 3	11&12	4.25
	30-30-11-	$-12 \ 2\frac{1}{2}$	11&12	4.53
	30-30-14	$2\frac{1}{2}$	14	2.50
	30-28-16	$2\frac{1}{2}$	16	1.10
	30-28-18	$2\frac{1}{2}$	18	.69
	30-20-12	$2\frac{1}{2}$	12	2.92

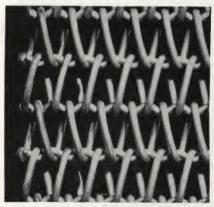




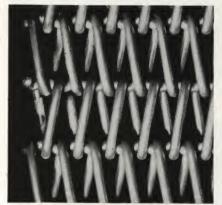




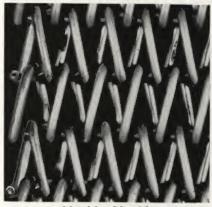
TYPICAL MESHES OF EQUALIZED SPIRAL WEAVE



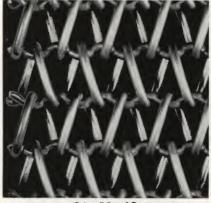




36-19-12



30-19-11-12



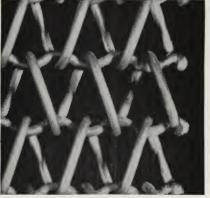
24-22-12

Table Continued from Page 10

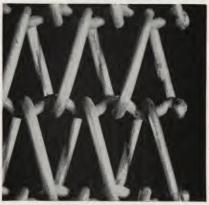
EQUALIZED SPIRAL

	UALIZED	SPIKA	-
Mesh			Wt. in Lbs. Per
Designations		Gauge	Square Foot
E-30-18-14	$2\frac{1}{2}$	14	1.75
30-24-11	$2\frac{1}{2}$	11	5.13
24-27-12	2	12	3.30
24-23-10	2	10	5.20
24-22-11	2	11	4.00
24-25-10-	-12 2	10&12	4.00
24-22-12	2	12	2.95
24-22-11-	-12 2	11&12	3.25
24-21-14	2	14	1.50
18-12-6	$1\frac{1}{2}$	6	6.75
18-12-9	1½	9	3.25
18-12-10	$1\frac{1}{2}$	10	2.95
18-18-9	$1\frac{1}{2}$	9	4.52
18-17-10	$1\frac{1}{2}$	10	3.69
18-16-11	$1\frac{1}{2}$	11	2.75
18-16-11-	-12 1½	11&12	2.22
18-16-12	$1\frac{1}{2}$	12	2.00
18-16-12-	-14 11/2	12&14	1.30
18-15-14	$1\frac{1}{2}$	14	1.08
18-10-10	$1\frac{1}{2}$	10	2.80
18-10-11	$1\frac{1}{2}$	11	2.26
18-10-12	$1\frac{1}{2}$	12	1.65
12-12-6	1	6	5.08
12-11-6	1	6	4.30
12-11-12	1	12	1.50
12-11-14	1	14	.75
12-10-9	1	9	2.51
12-8-6-10) 1	6&10	2.38
12-8-6-8	1	6&8	3.05
12-8-6	1	6	3.95
8-8-6	$\frac{2}{3}$	6	3.25
8-8-9	$\frac{2}{3}$	9	3.20
8-8-10	$\frac{2}{3}$	10	1.42
6-9-6	1/2	6	2.85
3 1: 10	1 10 1. 1	1.0	

Equalized Spiral Belt is used for many types of operations in the Processing and Food industries. Because of its higher tensile strength, Equalized construction is particularly desirable for operations requiring medium range temperatures.



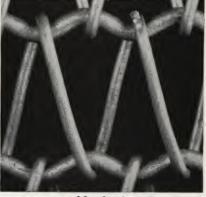
18-16-11



18-12-10

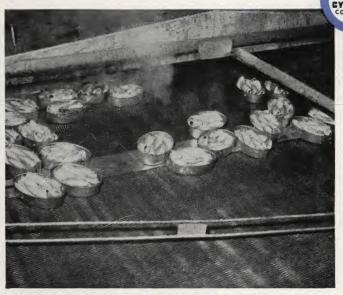


12-10-9

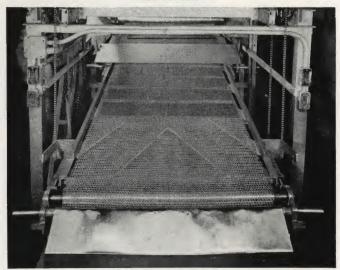


12-8-6

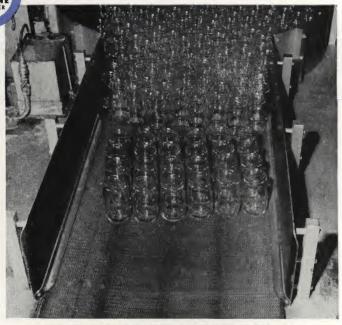
FRICTION DRIVEN CYCLONE SPIRAL BELTS



CANNING SARDINES AUTOMATICALLY ON CYCLONE SPIRAL WEAVE BELT



COOLING TUNNEL FOR PHONOGRAPH RECORD BLANKS



UNSCRAMBLING LINE FOR PICKLE PROCESSING

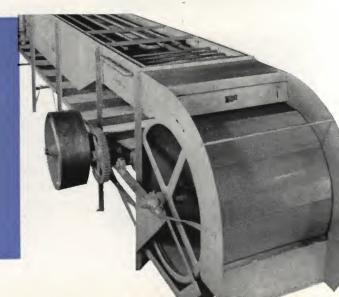


ANNEALING LEHR FOR GLASS PRODUCTS

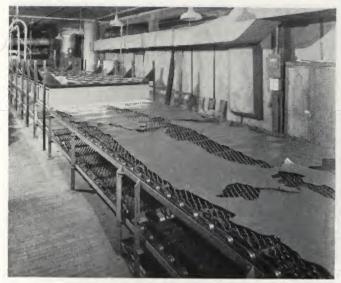


Left—Cyclone Metal Belt used on popular type of Hot Water Blancher.

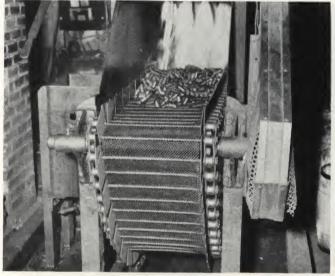
Right—Cyclone Spiral Woven Belt used on Vegetable Washer installation.



CYCLONE SPIRAL BELTS WITH POSITIVE DRIVES



LEATHER SPRAYING AND DRYING



METAL PARTS WASHER



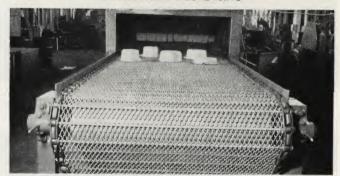
RECIRCULATING FURNACE FOR FORGINGS



PAN WASHER



METAL PARTS DEGREASING

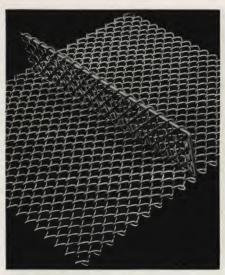


HEAT TREATING

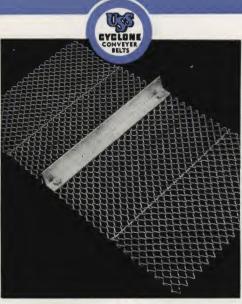


ASBESTOS PROCESSING

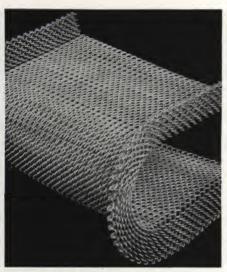
FRICTION DRIVEN CYCLONE SPIRAL BELTS



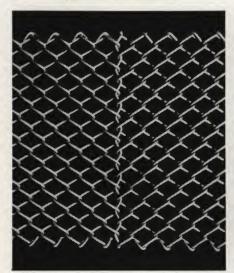
CONVENTIONAL WEAVE BELT WITH WOVEN FABRIC FLIGHTS TO CARRY PARTS UP AN INCLINE.



BELTS WITH ANGLE FLIGHTS CONVEY MATERIALS ON AN INCLINE.



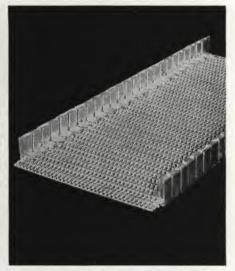
CONVENTIONAL WEAVE WITH TURNED-UP SELVAGE, HEIGHT NOT OVER 5% OF PULLEY DIAMETER.



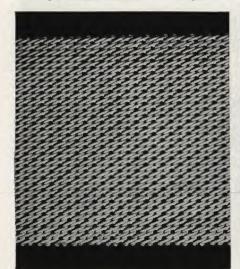
RIGHT-AND-LEFT HAND ALTERNATING SECTIONS WITH CRIMPED CONNECTOR WIRES WELDED IN PLACE.



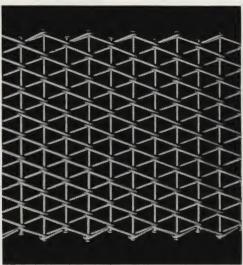
EQUALIZED BELT EQUIPPED WITH WEAR SHOES TO PREVENT EXCESSIVE WEAR TO EDGES OF BELT.



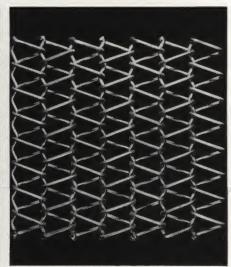
INTERLOCKING SIDE RETAINING
PLATES ARE SECURELY WELDED TO
THIS CYCLONE EQUALIZED BELT.



DUAL WEAVE BELT WITH WELDED SELVAGE FOR CARRYING SMALL PARTS OR PRODUCTS.

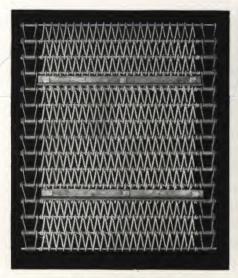


ROD-REINFORCED BELT WITH WELDED BUTTON SELVAGE. GENERALLY USED IN HEAT OPERATIONS.

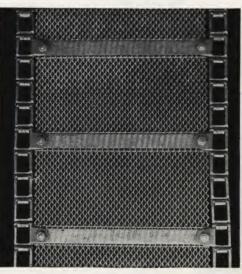


CYCLONE EQUALIZED BELTS ELIMINATE SIDE CREEP, EQUALIZE OPERATING STRESSES.

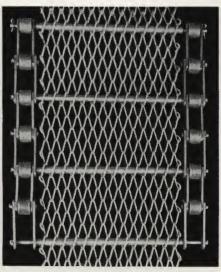
CYCLONE SPIRAL BELTS WITH POSITIVE DRIVES



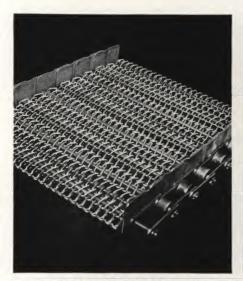
TYPE PCF—PINTLE CHAIN WITH FLIGHTS.



TYPE DLB—DETACHABLE LINK CHAIN WITH FLAT BARS.



TYPE LXCR-ROLLER CHAIN, STRAIGHT SIDE BAR, LARGE DIAMETER ROLLERS.



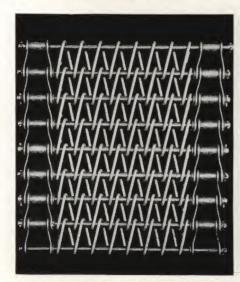
TYPE LXCRP—ROLLER CHAIN WITH OFFSET SIDE PLATES.



TYPE PCRP—PINTLE CHAIN WITH STAGGERED SIDE PLATES.



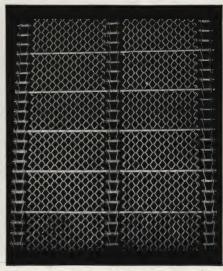
TYPE PCRW—PINTLE CHAIN WITH WEAR SHOES.



TYPE PCR—PINTLE CHAIN WITH CROSS RODS EVERY PITCH.



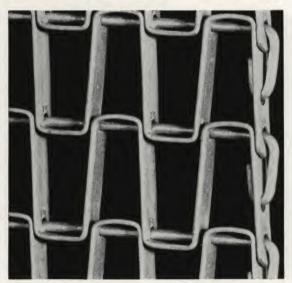
TYPE RCR—ROLLER CHAIN WITH CROSSRODS EVERY FOURTH PITCH.



TYPE PCR3—PINTLE CHAIN, 3 STRANDS AND CROSS RODS.



1" x 1" MESH-CLINCHED SELVAGE



1/2" x 1" MESH-CLINCHED SELVAGE



1/2" x 1/2" MESH_CLINCHED SELVAGE



In processing and conveying many products and materials, Cyclone Flat Wire Belt has certain advantages not attainable in belts of round wire spiral design. Its smooth, level surface is particularly desirable for many uses. Cyclone Flat Wire Belt is a very flexible belt of open mesh which permits free circulation of air, liquids, steam, etc. This belt is widely used in the Canning and Food industries and a wide variety of other industrial applications. It is especially efficient for handling products through annealing, baking, drying, washing, steaming, cooling, freezing and spraying processes. It is also very successfully used for sorting, assembling and numerous other operations. It is highly suitable for either sprocket (positive) or drum (friction) driving.

FEATURES

- 1. Smooth, level surface.
- 2. Maximum open area—for free circulation and drainage.
- 3. Sprocket or friction drive.
- 4. Simple endless splicing—any length required.
- 5. Worn or damaged sections easily replaced.
- 6. Safety edges.
- 7. Sanitary—readily cleaned.

SPECIFICATIONS (Clinched Edge Belt)

Available in galvanized carbon steel or U.S.S. Stainless Steels. Formed from 3/8" x .046 cold rolled strip. Connecting rods are 12 gauge (.1055" diam.). Made in three mesh sizes—1" x 1", ½" x 1" and ½" x ½". Belts can be made to 18 feet wide. Standard widths to 48 inches available from stock.

A Few Applications of Flat Wire Belts

Vegetable, Fruit and Prepared Food Canning. Glass Lehrs-annealing or decorating. General Package Conveying. Meat Packing. Pastry Icing and Cooling. Continuous Cooking, Pasteurizing. Sterilizing, Bottle Washing. Sorting and Grading. Washing, Cleaning. Cooling, Freezing. Drying and Dehydration. Container Filling. Spray Painting, Lacquering. Degreasing, Quenching.

Flat Wire Belt with welded buttonhead selvage is especially desirable for close precision and heavy duty purposes. The welded selvage eliminates possibility of tight or uneven edges and provides uniform tension across the entire width of the belt. It is highly suitable for either sprocket (positive) or drum (friction) driving. Available in standard weight (12 gauge, connecting rods) or extra heavy (#11 gauge connecting rods).

SPECIFICATIONS

Welded Buttonhead Selvage— (Standard Weight)

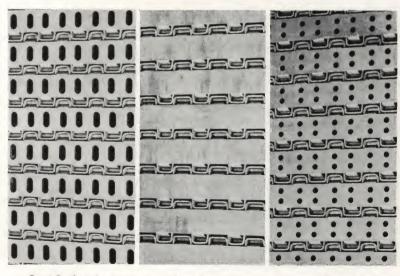
Available in galvanized carbon steel or U.S.S. Stainless Steels. Formed from \(^3\mathbb{s}'' \text{ x .046}'' \) cold rolled strip. Connecting rods are 12 gauge (.1055'' \) diam.). Made in three mesh sizes—1" \(\text{ x 1"}, \forall 2" \text{ x 1"} \) and \(^1\su 2" \text{ x 1"} \). Belts can be made to 18 feet wide. Standard widths to 48 inches available from stock.

Extra Heavy Weight

Same as above except that connecting wires are 11 gauge (.1205" diam.).

FLAT WIRE BELT-FLEX DECK STYLE

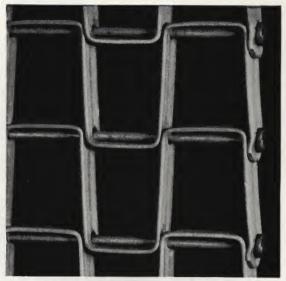
Furnished only in a combination of ½" x 1" mesh and extra heavy (11 gauge) connecting rods. Welded Buttonhead Selvage flex deck strip is .025" gauge, perforated or unperforated. Either galvanized carbon or U.S. Stainless Steels are used. This unique belt largely eliminates objectionable mesh marking on products while in soft or plastic processing stages. Aids in smoother transferring. Improves product quality. Provides an ultra-smooth surface desirable for numerous uses.



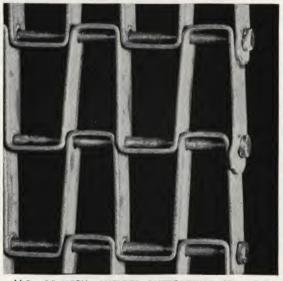
Oval Perforations

Unperforated

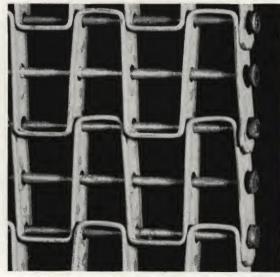
Round Perforations



1" x 1" MESH-WELDED BUTTONHEAD SELVAGE



1/2" x 1" MESH-WELDED BUTTONHEAD SELVAGE



1/2" x 1/2" MESH-WELDED BUTTONHEAD SELVAGE

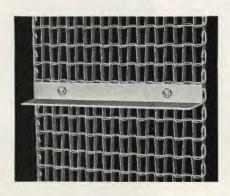


FLIGHTS

For operations where parts or products must be carried on inclining or declining conveyors, angle iron flights are usually the answer. An ingenious flat clamp, bolted flush with the bottom surface of flat wire belt provides an excellent low cost fastening medium. Flat head bolts fit snugly to the counter-sunk clamps and flights are held securely by hexagonal nuts.

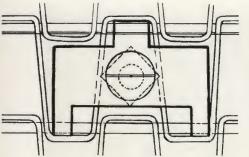
Flights can be attached wherever desired and can be removed and replaced in other positions as required.

Illustration at right shows how angle iron flight projects from top surface of belt and keeps material carried from sliding backward as belt moves up incline.

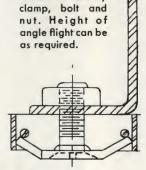




Photograph at left shows appearance of lower surface of belt. Note how clamps are shaped and attached so that they remain flush with lower belt surface.



Sketch above further illustrates detail of clamp attachment. Drawing is actual size.



Cross Section drawing below shows exactly how angle flight is attached to belt by

This method of attachment of angle flights is exclusive with Cyclone. Any number of clamps can be applied at desired intervals across the belt, depending on width of belt and load to be carried.

DRIVE SPROCKETS



diameters except 4" & 6".

table below.





Solid type sprocket at right will be furnished in 4" & 6" diameters only.

While driving Flat Wire Belt by lagged, straight-faced pulleys is often satisfactory, in general the use of sprockets on the drive end provides distinct advantages. The sprockets are positive. They prevent slippage, as is possible on pulleys or

drums and keep the belt in alignment throughout the entire conveyor length. Straight faced pulleys are usually recommended at the tail end.

Sprockets should be spaced no farther apart than 6 inches. Closer spacing is often necessary for heavier loads. On narrow belts, at least two sprockets should be used whenever possible. For specific data on standard sprockets, consult

CAST IRON SPROCKETS

(Teeth Not Machined)

Actual Pitch Diam. In.	Number of Teeth	Width of Face	Length of Hub	Std. Hub Dia.	Std. Stock Bore	Max. Bore Std. Hub	Approx. Weight Each Lbs.
4.486	13	1½"	21/8"	2½"	1"	1½"	5
6.211	18	1½"	21/8"	3"	1"	2"	7
7.940	23	2"	2½"	3"	11/4"	2"	12
10.696	31	3"	35/8"	3"	17/16"	2"	20
12.767	37	3"	35/8"	3"	111/16"	21/4"	25
14.492	42	3"	35/8"	3½"	115/16"	2½"	30
18.642	54	3"	35/8"	33/4"	27/16"		40

- 1. Larger hub diameters furnished if required.
- 2. Cast Iron Sprockets can be furnished optionally as follows:
 - (a) Painted, bored, with one set screw.
 - (b) Painted, bored, with two set screws (one at 90 degrees).
 - Painted, bored, set screwed and keywayed.
 - (d) Unbored and unpainted (no machining whatsoever).
- 3. For 1/2" x 1/2" mesh only, fully machined (cut tooth) sprockets are furnished.

CUT TOOTH SPROCKETS



Spoke Type Sprocket at left will be furnished in all diameters except 4" and 6".

Solid Type Sprocket at right will be furnished in 4" and 6" diameters only.



Fully-machined cut tooth sprockets afford numerous advantages as compared with sprockets with ordinary cast teeth. Cut tooth sprockets are precision-made to minimum tolerances. Machining insures perfect roundness, smooth teeth, precise indexing of tooth pitch and accurate alignment of keyways. Sprocket face is smooth and flat. Cut tooth sprockets of the same diameter are identical. Added together, this all means perfect aligning of all sprockets used on one shaft and uniform meshing with belt throughout the entire width. This reduces belt wear, insures longer belt life, improves belt performance.

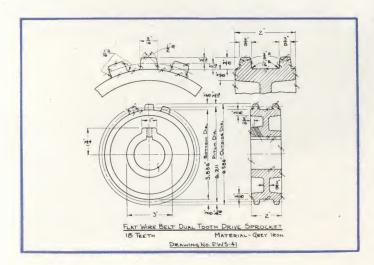
FULLY-MACHINED CUT TOOTH SPROCKETS

(For All Meshes)

Actual Pitch Diam. In.	Number of Teeth	Width of Face	Length of Hub	Standard Hub Diameter	Standard Stock Bore	Maximum Bore With Std. Hub	Approx. Weight Ea. Lbs.
4.486 6.211 7.940 10.696	13 18 23 31 37 42	1½" 2" 2"	2½" 2½" 3" 3" 3" 3" 3"	2½" 3" 3" 3" 3" 3" 3" 3½" 3½"	1" 1" 1¼"	1½" 2" 2" 2" 2" 2" 21½" 2½"	5 10 12 17 21 31 37
12.767 14.492 18.642	37 42 54	2" 2" 2" 2" 2" 2"	3" 3" 3"	3" 3½" 3½" 3¾"	$\begin{array}{c} 1'' \\ 1'' \\ 1^{1}4'' \\ 1^{7}16'' \\ 1^{11}16'' \\ 1^{15}16'' \\ 2^{7}16'' \end{array}$	2" 2½" 2½"	21 31 37

Notes: 1. Larger hub diameters furnished if required.

- 2. Cut Tooth Sprockets furnished (Painted) bored, set screwed and keywayed.
- Cut Tooth Sprockets can also be furnished in a special alloy with flame-hardened teeth.

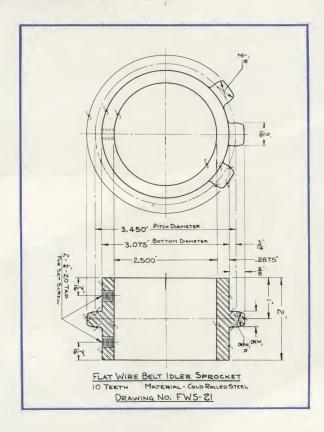


IDLER SPROCKETS

For processing some products, side or lateral belt movement must be eliminated. Idler Sprockets are an efficient aid toward eliminating lateral movement. They can be mounted on



supporting rolls or shafts across the width of the belt, at intervals as necessary throughout the length of the conveyor. Available from stock in only one size specified on Drawing FWS-21.



DUAL TOOTH SPROCKETS

Dual Tooth Sprockets are designed primarily for narrow belts. Each Dual Sprocket provides driving pull equal to two single tooth sprockets and requires less space on the drive shaft. For example: A $3\frac{1}{2}$ " or $4\frac{1}{2}$ " wide belt will not accommodate two single tooth sprockets.



Driving such narrow belts with one single tooth sprocket concentrates all strain at one point and eventually distorts the belt. The Dual Tooth Sprocket distributes the pull at two points. This provides driving pull equivalent to two Single Tooth Sprockets. Additional Dual Tooth Sprockets should be used wherever increased widths permit. Available from stock only in one size specified in drawing number FWS-41.





newest, finest, most versatile FLAT WIRE BELT

SUPERIOR FEATURES, OUTSTANDING PERFORMANCE

This small-mesh flat wire belt (greatly reduced to approximately ½-inch opening) provides an ideal, smooth surface for handling comparatively small products. It is the answer for conveying small jars, cans, bottles, tumblers and other small containers and products. Because Cyclone "Convey All" Belt flexes readily over a comparatively small radius, it is ideal for discharging to transfer plates or conveyors. Tipping, spillage and breakage are no longer problems.



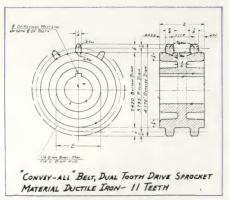
"CONVEY-ALL" BELT SPECIFICATIONS

Manufactured of %-inch x .046-inch cold rolled flat strip. Assembled with 12-gauge .1055-inch round connecting rods. Selvage finished with the unique welded button-head style. Made in one standard mesh opening only, approximately ½-inch square. Belts can be fabricated in any width up to and including 20 feet. "Convey-All" Belts are normally furnished in galvanized carbon steel and USS Stainless Steels. Can also be furnished in uncoated high carbon and low chrome alloys, if required.

WHY "CONVEY-ALL" BELT WAS DEVELOPED

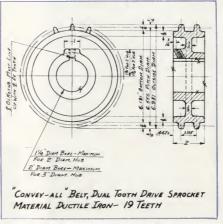
For numerous reasons, Cyclone Flat Wire Belt users have expressed their need for a smaller mesh flat wire belt. Continued growing demand for this type of belt made it a "Must" with Cyclone. It resulted in the designing and producing of Cyclone "Convey-All" Belt—the answer to an increasing number of conveying problems. Belt users have accepted this new belt with open arms. They can see at once the advantages of this new design.

SPROCKETS FOR CYCLONE "CONVEY-ALL" BELTS

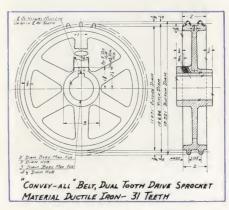


4-inch diameter sprocket Drawing FWS-87

The drawings above show in detail the Dual Tooth Sprockets designed for use with the new Cyclone "Convey-All" Belt. We have standardized on three diameters, namely 4-inch, 6-inch and 10-inch. These sprockets are made from high grade ductile iron, to provide maximum strength and long service.



6-inch diameter sprocket
Drawing FWS-81



10-inch diameter sprocket
Drawing FWS-82

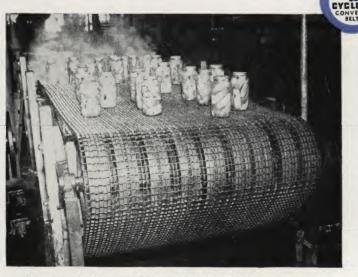


Actual photograph of dual tooth sprocket for "Convey-All" Belt

Actual Pitch Diam. In.	Number of Teeth	Width of Face	Length of Hub	Standard Hub Diameter	Standard Stock Bore	Maximum Bore	Approx. Weight Ea. Lbs.
3.795"	11	2"	2"	2"	1"	11/4"	4
6.556"	19	2"	2"	3"	11/4"	2"	8
10.6962"	31	2"	3"	3"	17/16"	2"	16

Notes: "CONVEY-ALL" dual tooth sprockets furnished with specified bore, keyway, one set screw and painted.

CYCLONE FLAT WIRE CONVEYOR BELTS ARE



Processing Pickles on a Cyclone Flat Wire Belt. Jars are rinsed, ready for labelling and packing.



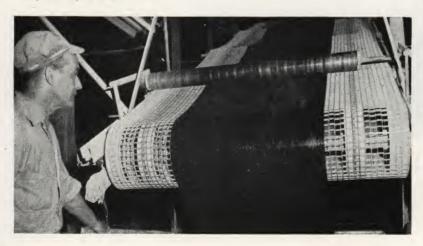
U.S.S. Cyclone Stainless Steel Flat Wire Belt used for conveying fig juice through pasteurizer.



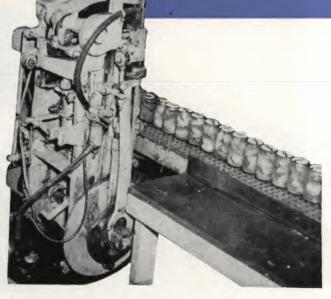
Decked Dryer above is equipped with approximately 1200 feet of Cyclone Flat Wire Belt driven by Cyclone Sprockets.



Empty cans are automatically washed then dried on a Cyclone Flat Wire Belt.



Because the uses of Flat Wire Belt are so widely varied, we can illustrate on these two pages only a few of the many applications to which this style of belt is so well suited. But we can definitely help you to specify the right equipment for your needs.

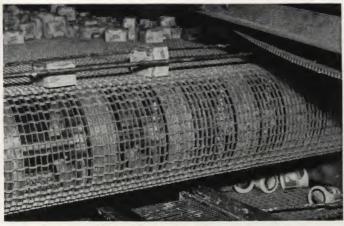


Cyclone Flat Wire Belt for conveying glass-packed tomatoes along production line.

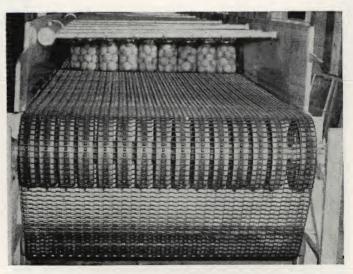


Here hot rubber stock is being conveyed from the "mill" to overhead drying belt on a 54 inch wide Galvanized Cyclone Flat Wire Belt.

USED BY INDUSTRIES FROM COAST TO COAST



Here packaged Ice Cream is quick-frozen at sub-zero temperatures on Cyclone Metal Conveyor Belts. Two types, Cyclone Flat Wire and Cyclone Flex-Grid appear in the illustration.



Continuous cooker using Cyclone Flat Wire Belt and Sprockets. This belt is 135 feet long and 59 inches wide.

Perhaps none of the installations pictured here would meet your special processing requirements. Yet, it is usually not too difficult for the producers of conveyor systems to design and construct units employing Cyclone Flat Wire Belt that will perform your mechanical handling and processing operations most efficiently and economically. Cyclone Flat Wire Belt is well known to most conveyor designers and builders.

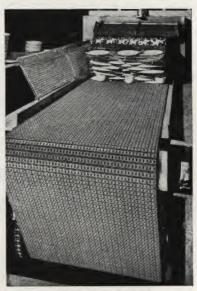


Dunkley Company, Kalamazoo, Michigan, used Cyclone Flat Wire Belts with angle flights to produce the Elevator Conveyor shown above.

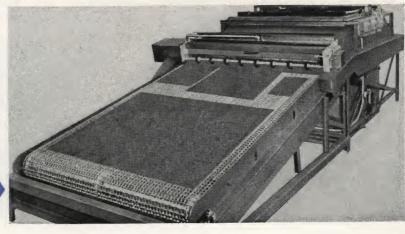
Automatic washer and dryer for lithograph plates greatly speeds up drying process, eliminates special drying room. Cyclone Flat Wire Belt is 5 feet wide, standard $1\,^{\prime\prime}$ x $1\,^{\prime\prime}$ galvanized specification.



Peach halves, with skins and stones removed, are carried up an incline to further processing operations on a Cyclone Flat Wire Belt equipped with corrugated flight lifts.



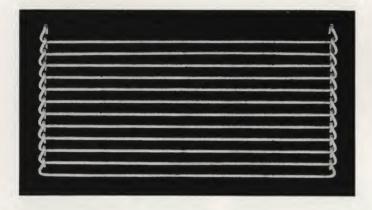
Here we see a decorating Lehr for drying the decorated china dishes and novelties. The belt used is a Cyclone Flat Wire Belt with oval Perforated Table Top surface.

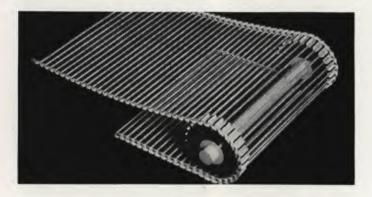


CYCLONE FLEX-GRID BELTS FOR STRAIGHT LINE CONVEYORS



Flex-Grid Belt is recognized as the best medium for conveying a wide variety of light products. It is especially adapted to bakery use for handling, cooling, icing and wrapping bread, rolls, doughnuts, cakes, etc. New uses for Flex-Grid are being developed constantly by many industries. This design permits ready cleaning and promotes sanitation.







SPECIFICATIONS

Size of wire—No. 9 gauge—(.148" diameter). Pitch—½"—center to center of adjacent parallel wires. Materials—available in carbon steel, uncoated raw finish, galvanized, tinned or in U.S.S. Stainless Steel.

Standard Widths:

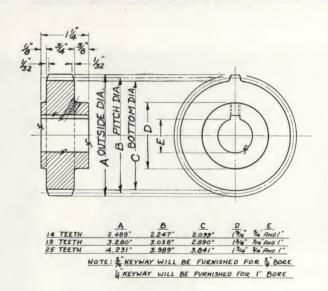
6" wide, weight .921 lbs. per lin. ft. 12" wide, weight 1.625 lbs. per lin. ft. 18" wide, weight 2.330 lbs. per lin. ft. 24" wide, weight 3.035 lbs. per lin. ft.

Cyclone Flex-Grid Belt operates efficiently on sprockets of small diameters. This feature makes it especially suitable for overhead and multiple deck conveyors. Consequently they can be erected and used in limited spaces.

SPROCKETS FOR STRAIGHT LINE CONVEYOR BELTS

Sprockets for straight Flex-Grid Belt are available in the three sizes specified below. These specially designed, fully-machined sprockets provide accurate, positive drive and efficient performance of both belt and sprockets.





U.S.S. STAINLESS STEELS

Food industries have been alert in recognizing the many advantages of U.S.S. Stainless Steels. U.S.S. Stainless Steels eliminate spoilage losses caused by rust or other metallic contamination and promote the high degree of sanitation so important in food preparation.

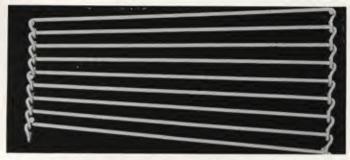
Conveyor Belts of U.S.S. Stainless Steels successfully resist most corrosive attacks from heat, sugars, acids and alkalis that either limit the life of belts made of carbon steels and other less resistant metals or actually prohibit their use.

The greater strength and durability of U.S.S. Stainless Steels insure longer belt life.

Users of Cyclone Metal Conveyor Belts—more and more—are specifying U.S.S. Stainless Steels for better processing operations and superior products.

Cyclone Flex-Grid Belt can be operated on standard 90-degree or 180-degree turns or less, as desired. The turn arrangement is extremely desirable in some operations because it conserves valuable space and simplifies transferring problems. Sprockets provide positive drive and eliminate belt slippage. The illustration below shows how Flex-Grid Belt is constructed for turn conveyors. In ordering, specify whether right or left hand turn is required.

SPECIFICATIONS



Size of wire—No. 9 gauge—.148 inch. Pitch—inside edge .500-inch centers, outside edge .690-inch centers.

6-inch wide belt-

turns on 16½ inch radius to inside of belt. turns on 19½ inch radius to center of belt. turns on 22½ inch radius to outside of belt.

12-inch wide belt-

turns on 30 inch radius to inside of belt. turns on 36 inch radius to center of belt. turns on 42 inch radius to outside of belt.

18-inch wide belt-

turns on 45¾ inch radius to inside of belt. turns on 54¾ inch radius to center of belt. turns on 63¾ inch radius to outside of belt.

24 inch wide belt-

turns on 61½ inch radius to inside of belt. turns on 73½ inch radius to center of belt. turns on 85½ inch radius to outside of belt.

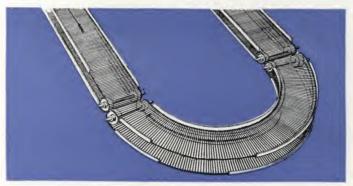
Weights of 180° Turn Conveyor Belts.

6 inch wide- 9 lbs.

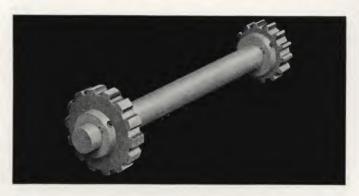
12 inch wide-26 lbs.

18 inch wide-57 lbs.

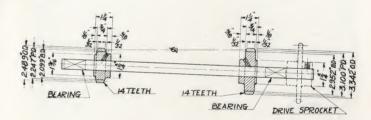
24 inch wide-98 lbs.



SPROCKETS FOR TURN CONVEYOR BELTS

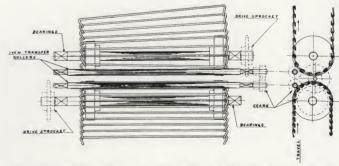


Tapered pitch sprockets, matched in pairs, are required to drive Flex-Grid Belt on turn conveyors. This provides a positive drive and insures uniform tension on belt edges. Detail and dimensions of matched sprockets is illustrated below. In ordering, specify number of inside and outside sprockets desired and width of belt with which they will be used.



Note: Cyclone furnishes only the matched pair of sprockets in the illustration above. We do not supply shafts, bearings, etc.

Below is a sketch showing a suggested method of transfer between straight and turn conveyors, or successive straight line conveyors. One or more rollers, driven or idle, may be used depending on the product to be conveyed. The characteristics and size of some products will not require such transferring aids at these points.

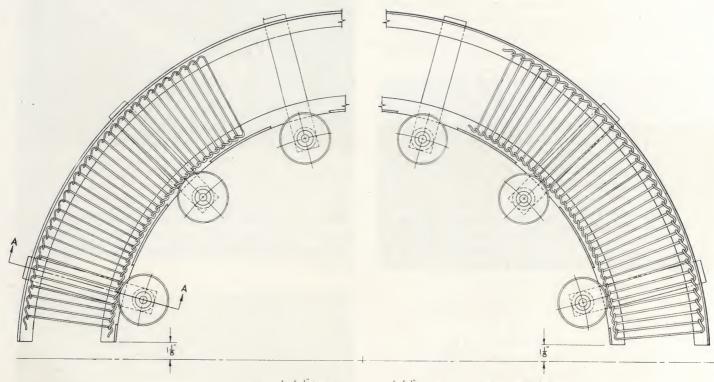


Note: Cyclone furnishes only the Belts and Sprockets for same in the illustration above. We do not supply shafts, bearings, transfer rollers, etc.

IDLE SPROCKETS FOR FLEX-GRID TURN CONVEYOR BELTS



PLAN



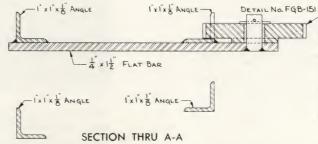
PHONE, WRITE OR WIRE FOR MORE DETAILED DATA-

For 6" width ask for Sketch No. FGB-140.

For 12" No. FGB-150.

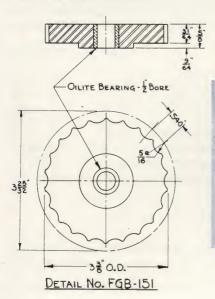
For 18" No. FGB-160.

For 24" No. FGB-170.

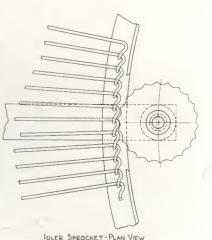


CONVEYOR BUILDERS AND BELT USERS-

The sketches mentioned will assist you in your plans and layout for Flex-Grid Turn Conveyors.



The Idler Sprockets illustrated provide definite advantages. They (1) reduce friction, (2) eliminate belt wear on the inside radius where most strain is encountered, (3) improve normal belt performance, (4) provide freeroperating belt, (5) add materially to life of belt, (6) reduce ultimate belt costs.



HINGE CLIPS

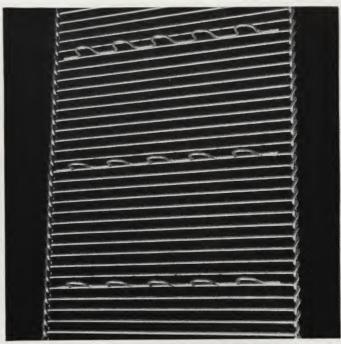
Cyclone Reinforcing Hinge Clips provide definite advantages in processing and conveying some products on Flex-Grid Belts. Hinge clips eliminate spreading or bending of parallel cross wires and greatly strengthen the belt. One or more parallel rows of Hinge Clips may be used, spaced as desired on straight line belts. Clips, themselves, stocked only in USS 18-8 Stainless Steel for use with either carbon steel or all Stainless Steel Belts. Belts made complete with Hinge Clips in place at extra cost.

FLIGHTS

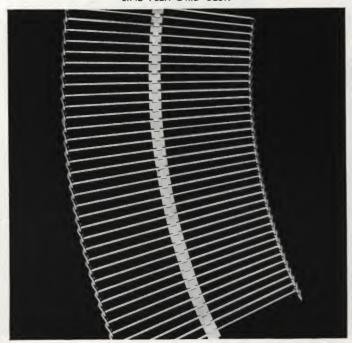
For operations where products must be carried on inclining or declining conveyors, flights, as shown below, are usually the answer. Flights formed from the same sized wire as in the belt are welded in place and spaced as required by the particular product to be handled. These standard flights are available from stock at extra cost.



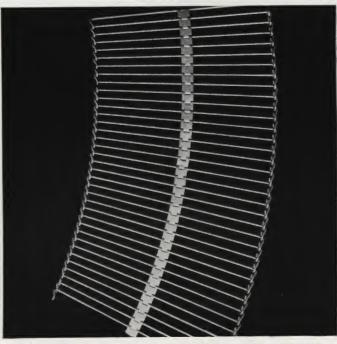
HINGE CLIPS, SINGLE ROW, CENTERED, FOR STRAIGHT LINE FLEX-GRID BELT.



STRAIGHT LINE FLEX-GRID BELT WITH FLIGHTS.



HINGE CLIPS, SINGLE ROW, CENTERED, FOR FLEX-GRID TURN CONVEYORS—LEFT-HAND.

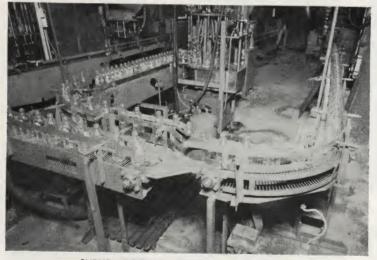


HINGE CLIPS, SINGLE ROW, CENTERED, FOR FLEX-GRID TURN CONVEYORS—RIGHT-HAND.

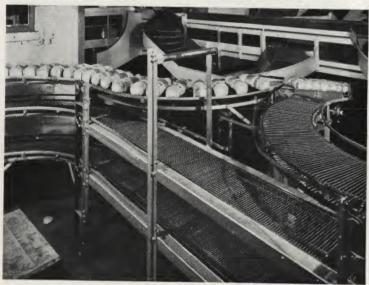
IF YOU HAVE A CONVEYING PROBLEM ON LIGHT WEIGHT



CHOCOLATE DIPPED CONES-INSPECTION AND PACKING



SYRUP-BOTTLES, FILLING AND CAPPING

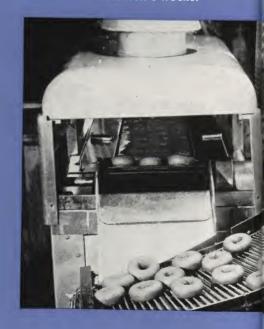


BREAD-FROM WRAPPING MACHINE TO LOADING DOCK

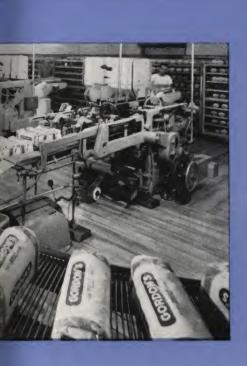


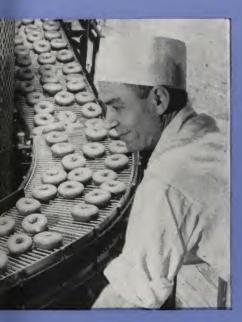


 Wrapped Bread is carried from the final wrapping machine on straight line and turn Flex-Grid Conveyors to the loading dock and salesmen's trucks.

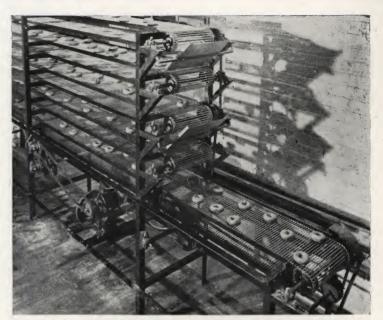


PRODUCTS, CYCLONE FLEX-GRID BELTS MAY HELP YOU

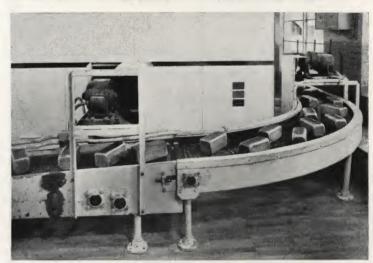




 Doughnuts from fryer are carried on a Flex-Grid Turn Conveyor up an incline to the deck cooling unit as illustrated in the upper right hand corner.



DOUGHNUTS-COOLING . . . SUGARING TO PACKING



BREAD-FROM COOLING, TO SLICING MACHINE



BREAD-DECK TYPE COOLING CONVEYORS



DRIVES

An ordinary friction drive is all that is usually required to operate a Cyclone Conveyor Belt.



TYPE "A" PLAIN PULLEY DRIVE

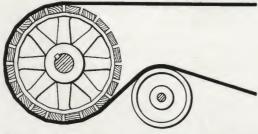
A wrap of 180° on the drive pulley is obtained without snubbing.

A friction drive is composed of a head and tail pulley of proper diameter to provide sufficient frictional surface to drive the belt when loaded. Load to be carried determines the diameter of pulleys to be used. Heavier loads and longer conveyor lengths require larger pulleys.

For belts carrying light loads over short distances, smaller pulleys are usually satisfactory.

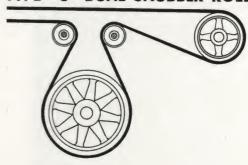
TYPE "B" SNUBBER ROLL

To secure greater contact with the driving pulley, the use of a snubber roll, as illustrated below, is recommended.



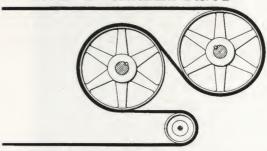
The addition of a snubber roll will transmit noticeably increased power to the belt.

TYPE "C" DUAL SNUBBER ROLL



To further increase belt traction, variations of the snubber roll construction shown above may be used. Type "C" is recommended for heavier installations where Type "A" or "B" may not provide sufficient traction for good operation.

TYPE "D" TANDEM DRIVE



Synchronized dual pulleys with snubbing roll as shown may also be used for exceptionally heavy-duty service where additional traction is required.

The drives shown here are those most commonly used. Other arrangements and combinations of pulleys and snubbers can be employed to meet special conditions.

"TAKE-UP" METHODS

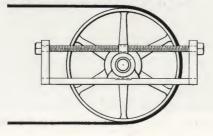
Illustrated below are two basic types of take-up. Sketch "A" shows the screw type, which is generally satisfactory for operation at normal temperatures.

The Counterweighted type illustrated by Sketch "B" is often used if elevated temperatures are involved. For elevated temperatures this type of take-up is preferred because it automatically maintains uniform belt tension. Unnecessary

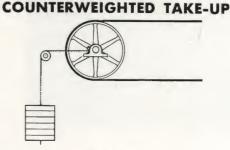
tension beyond that required to move the loaded belt and maintain straight travel should be avoided. Any excessive tension greatly reduces belt life.

Other standard mechanical and automatic take-ups are available. Manufacturers and suppliers of Transmission Equipment should be consulted on your specific requirements.

SCREW TYPE TAKE-UP



SKETCH "A"



SKETCH "B"

INSTALLING AND CARE

PULLEYS OR DRUMS

For friction-driving Cyclone Spiral Woven or Flat Wire Belts, straight faced pulleys should always be used whether for driving, idling or snubbing purposes. Fully machined straight faced pulleys are always preferable. Never use crowned pulleys with Cyclone Metal Belts. It can be readily seen that Woven Metal Belts will immediately conform to the contour of crown pulleys, taking a permanently stretched "set" in the center, leaving nothing but a distorted—and possibly ruined—belt.

For positive-driving Cyclone Spiral Belts (with side driving chains), intermediate straight faced pulleys, of the proper diameter, should be placed between the chain sprockets to hold the fabric on the exact pitch line. Unless such support is provided, the fabric will seek the shortest straight direction in making the radius. Serious damage to the belt is a certain result.

With some products, the residue of which would tend to adhere and build up on full-width intermediate pulleys, an exaggerated, false pitch line is usually created. With products of this nature, an ample number of narrow-faced pulleys, equally-spaced between chain sprockets, should be used.

The method for determining maximum diameter of intermediate pulleys is:

Pitch Diameter of chain sprockets minus overall thickness of the belt, equals correct diameter of intermediate pulleys.

*NOTE: An important safety factor is provided, if intermediate pulley diameters are held slightly below the maximum.

"LAGGING" OF PULLEYS OR DRUMS (For Friction Drive Only)

To insure maximum efficiency, the traction power will be increased if frictional materials be attached to drums or pulleys. A variety of excellent "lagging" materials is available. Manufacturers and suppliers of frictional materials and transmission equipment should be consulted to obtain the best for your particular requirements.

BELT SUPPORTS

Cyclone Conveyor Belts should always be amply supported across their full width, and not on the edges only.

Usually the best means of belt support is obtained by the use of Idler Rolls, spaced at such intervals as the conveyed product requires. Use of Idler Rolls minimizes friction, requires less tension and power to drive the belt, and lengthens belt life. To adjust for possible belt creep and insure better belt alignment, adjustable idler rolls should be installed. To be most effective, these idler rolls should usually be located near the discharge end of the conveyor.

In processes where Idler Rolls are not practical, stationary metal supports can be used. This arrangement usually consists of angle irons or other shapes, under each belt edge, with as many additional supports, equally spaced across the width, as load weight requires. To reduce frictional wear, these metal supports may be faced with friction-reducing materials.

SIDE GUIDES

The use of fixed guides on both the conveying surface and the return are often important to satisfactory operation.

Vertical guide rollers, flanged idler rolls or continuous angle irons or flat bars are the means most commonly employed. Lining stationary side guides such as angle irons or flat steel bars with friction-reducing materials minimizes belt wear and improves operation.

INSTALLING AND CARE

When first installed on the conveyor, the belt should be run slowly without load and carefully inspected throughout its entire length. Any tendency to "cross travel" should be noted and necessary adjustments made in pulleys, supporting rolls, sprockets, or any side-guiding arrangements.

Conveyor Belts should never operate under unnecessary tension. There should be just enough tension to provide sufficient traction to carry the load. Belts with too tight a return are difficult to control in their travel and wear excessively.

Regardless of how accurately it is originally lined up, any conveyor installation may need further adjustments from time to time. Consequently periodic checks should be made.



HOW TO GET INCREASED SERVICE FROM YOUR

CYCLONE BELTS

SPIRAL . . . FLAT WIRE . . . FLEX-GRID

PULLEYS

- 1. Adjustable, straight-faced pulleys should be used at all times. Check and correct their alignment frequently.
- Drive pulleys should be as large as practicable.
 Pulleys of too small diameter may not supply sufficient traction.
- 3. To increase traction, cover drive pulleys with suitable lagging material whenever possible.
- 4. If possible, install snubber rolls in accordance with recommended driving methods.

SUPPORTS

- 5. In designing the conveyor, make sure belt will be supported across its full width.
- 6. If idler rolls are used, they should be adjustable to assure proper alignment.
- If fixed rolls are used, they should be level and at right angles to the center line of the belt.

SPROCKETS

- **8.** For Flat Wire Belts—follow recommendations on pages 18 and 19.
- 9. For Flex-Grid Belts—follow recommendations on pages 22, 23 and 24.

TENSION

- To obtain greater control of belt travel, conveyor design should allow for slack on the return side.
- When belt is first installed, important minor adjustments will be required.

- 12. Make sure all spirals are flat and in proper position and all rollers free-turning and level before operating belt.
- **13.** Test-operate belt slowly without load until all necessary adjustments are made.
- 14. Increase tension slowly and evenly to permit meshing wires to adjust themselves. After takeups have been extended to the maximum, any excess belt length should be removed.
- 15. Apply only enough tension to the take-up to permit belt to move under load.
- **16.** Maintain uniform tension on belt at all times so stretching or distortion will not occur.
- 17. Overloading stretches and weakens belts and shortens their service-life.
- 18. Uneven loading across the width produces uneven tension, which may distort belt and interfere with smooth operation.

HIGH TEMPERATURE PRECAUTIONS

- 19. New belts for high temperature operations should be run steadily at least 24 hours without load and at gradually increased temperatures until maximum operating temperature is reached.
- Follow same gradual procedure by increasing load slowly until belt carries maximum recommended load.
- 21. Thereafter always keep temperatures and loads below the recommended heat—and—load limit for the belt you are operating.
- 22. Stopping a belt that is running through elevated temperatures will overheat it considerably.

FINAL HELPFUL SUGGESTION

Get the habit of checking your belts frequently and making repairs immediately when needed. Your belts will last longer, work better, cost less to maintain.

FRACTIONAL GAUGES ...

DECIMAL EQUIVALENTS ...

SPLIT GAUGES IN DECIMAL SIZES...

Amer	zes of Plain Wire ican Steel & Wire any, Steel Wire e Numbers.
	2
	3
	4
	5
	6
	7
	8
	9
	10
	11
	12
0	13
0	14
0	15
0	16
0	17
•	18
0	19
•	

Decimal Equivalents of Fractions			
1/64 = .0156	³³ / ₆₄ = .5156		
1/ ₈₂ = .0312	17/32 = .5312		
%4=.0468	35 ₆₄ = .5468		
1/16=.0625	9/16 = .5625		
5 ₆₄ = .0781	37 ₆₄ = .5781		
3/ ₅₂ = .0937	19/32 = .5937		
% = .1093	³⁹ / ₆₄ = .6093		
1/8=.125	5/ ₈ = .625		
%4=.1406	41/64 = .6406		
5 ₅₂ =.1562	$^{21}/_{32} = .6562$		
11/64 = .1718	⁴³ / ₆₄ = .6718		
% ₆ =.1875	11/16 = .6875		
13 ₆₄ = .2031	45/64 = .7031		
3/ ₃₂ =.2187	$2\frac{3}{32} = .7187$		
15/4=.2343	47/64 = .7343		
1/4 = .25	3/4 = .75		
17/64 = .2656	4% = .7656		
%2=.2812	25 / ₃₂ = .7812		
19/4=.2968	$5\frac{1}{64} = .7968$		
5/6=.3125	¹³ / ₁₆ = .8125		
²¹ / ₆₄ =.3281	$5\frac{3}{64} = .8281$		
11/32=.3437	$2\frac{7}{32} = .8437$		
23/ ₆₄ = .3593	55/64 = .8593		
3/ ₈ =.375	₹ ₈ =.875		
25/64 = .3906	⁵⁷ / ₆₄ = .8906		
13/32=.4062	29 / ₃₂ = .9062		
27/4=.4218	⁵ % ₄ =.9218		
₹ ₁₆ =.4375	$^{15}/_{16} = .9375$		
29 ₆₄ =.4531	6½=.9531		
15 ₈₂ =.4687	3½=.9687		
31/ ₆₄ =.4843	63/64 = .9843		
1/2=.5	1=1.0		

		Gauges in merican Stee			
1 - 1/4 1/2 3/4	.283 .278 .273 .268	13 - 13 ¹ / ₄ 13 ¹ / ₄	.0915 .089 .086 .083	25 - 25 ^{1/4} 25 ^{1/4} 3/4	.0204 .0198 .0193 .0187
2-21/4 1/2 3/4	.2625	14 -	.080	26 -	.0181
	.258	14 1/4	.078	26 ^{1/4}	.0179
	.253	14 1/2	.076	26 ^{1/4}	.0177
	.248	34	.074	3/4	.0175
3 -	.2437	15 -	.072	27 -	.0173
3 1/4	.239	15 1/4	.070	27 1/4	.0170
1/2	.235	15 1/2	.067	27 1/2	.0168
3/4	.230	3/4	.065	34	.0165
4 - 4 1/4 1/2 3/4	.2253	16 -	.0625	28 -	.0162
	.221	16 1/4	.060	28 ^{1/4}	.0159
	.216	16 1/2	.058	28 ^{1/4}	.0156
	.212	1/4	.056	3/4	.0153
5 - 5 ^{1/2} 3/4	.207 .203 .200 .196	17 — 17 ½ 14 ½ 34	.054 .052 .051 .0491	29 - 29 ^{1/4} 29 ^{1/4} 3/4	.0150 .0148 .0145 .0143
6 -	.192	18 -	.0475	30 -	.0140
6 1/4	.188	18 1/4	.0459	30 ^{1/4}	.0138
6 1/2	.185	18 1/2	.0443	30 ^{1/4}	.0136
3/4	.181	18 1/4	.0426	34	.0134
7 - 14/4 1/2 3/4	.177 .173 .170 .166	19 - 19 1/4 1/2 3/4	.0410 .0394 .0379 .0363	31 - 31 ¹ / ₄ 1/ ₂ 3/ ₄	.0132 .0131 .0130 .0129
8 -	.162	20 -	.0348	32 -	.0128
8 1/4	.159	20 ^{1/4}	.0340	32 ^{1/4}	.0126
1/2	.155	20 ^{1/2}	.0332	32 ^{1/2}	.0123
3/4	.152	3/4	.0325	3/4	.0121
9 - 9 1/4 1/2 3/4	.1483 .145 .142 .138	21 - 21 1/4 1/2 3/4	.0317 .0309 .0301 .0294	33 - 33 ¹ / ₄ 34	.0118 .0115 .0111 .0108
10 -	.135	22 -	.0286	34 -	.0104
	.131	22 ^{1/4}	.0279	34 1/4	.0102
	.128	22 ^{1/2}	.0272	34 1/2	.0100
	.124	34	.0265	34	.0097
11 -	.1205	23 -	.0258	35 -	.0095
11 ¹ / ₄	.117	23 ¹ / ₄	.0251	35 ^{1/4}	.0094
1 ¹ / ₂	.113	23 ¹ / ₄	.0244	35 ^{1/4}	.0093
3/ ₄	.109	34	.0237	34	.0091
12 - 12 1/2 12 1/2	.1055 .102 .099 .095	24 - 24 ^{1/4} 24 ^{1/4} 34	.0230 .0224 .0217 .0211	36 - 36 ½ 36 ½	.0090 .0089 .0087 .0086



Status of installation—Operating	or Contemplated	
Product or Products to be carried	•	
Trouder of Trouders to be carried		
PARTICULARS OF INSTALLATION:		
Distance between centers of main pulleys		
Maximum take-up permitted		
Maximum permissible diameter of Driving Pulley		
Preferred diameter of Driven Pulley		
Will belt require special support?Nature of suc	h support	
Spacing of supporting rollers or idlers, if required		
Diameter of supporting rollers		
Will belt operate through () Oven () Cooling Tunnel () Drier () Dimensions		
Will belt operate () Over Flame () Under Flame ()		
At which end will drive be located?		
Length of BeltWidth Permitted tolerance in width		
Will belt run between guides?Spacing of	_	
Is conveyor horizontal or inclined?		
Angle of Incline, if any		
PERTINENT DETAILS OF BELT:		
Kind of material to be carried or conditioned		
Is material Wet? () Dry? () Hot? () Cold? ()	
In what temperatures must belt operate? Maximum	Minimu	m
Acid or alkaline characteristics of material		
What metal most impervious to acid or alkali named?		
What is maximum weight per sq. ft. of material to be carried?		
Dimensions of material carried		
Suggested mesh size (Clear Opening)		
Speed of Belt		
Remarks:		
•	City	Zona State

CYCLONE BELTS ARE MADE OF VARIOUS METALS AND ALLOYS



and mail it to us. We will then recommend the Cyclone Metal Conveyor Belt that will best meet your specific needs.	
Status of installation—Operatingor Contemplated	
Product or Products to be carried	
PARTICULARS OF INSTALLATION:	
Distance between centers of main pulleys	
Maximum take-up permitted	
Maximum permissible diameter of Driving Pulley	
Preferred diameter of Driven Pulley	
Will belt require special support?Nature of such support	
Spacing of supporting rollers or idlers, if required	
D'	
Diameter of supporting rollers	
Will belt operate () Over Flame () Under Flame () Through Flame?	
At which end will drive be located?	
Length of BeltWidth of Belt	
Permitted tolerance in width	
Will belt run between guides?Spacing of guides	
Is conveyor horizontal or inclined?	
Angle of Incline, if any	
PERTINENT DETAILS OF BELT:	
Kind of material to be carried or conditioned	
Is material Wet? () Dry? () Hot? () Cold? ()	
In what temperatures must belt operate? MaximumMinimum	
Acid or alkaline characteristics of material	
What metal most impervious to acid or alkali named?	
What is maximum weight per sq. ft. of material to be carried?	
Dimensions of material carried	
Suggested mesh size (Clear Opening)	
Speed of Belt	
Remarks: Company Name	
Individual's Name	
Street Address	
CityZoneState	

CYCLONE BELTS ARE MADE OF VARIOUS METALS AND ALLOYS



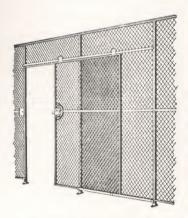
CATALOG No. 5

CYCLONE METAL CONVEYOR BELTS

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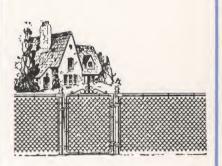
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HOT U.S.S. CYCLONE PRODUCTS



CYCLONE SECTIONAL PARTITIONS

All standard size, easy to erect. Sections can be added as needed or taken out and used elsewhere. No refitting—all punched alike for balts.



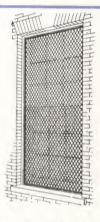
CYCLONE CHAIN LINK RESIDENTIAL FENCE

A practical, trim appearing fence for homes, estates, school yards, cemeteries. Heights from 3 feet up, with gates to match. Woven in 2-inch mesh in either No. 6; No. 9 or No. 11 gauge wire.



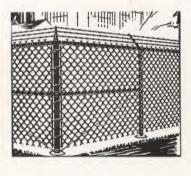
CYCLONE STEEL PICKET FENCE

This dignified and beautiful fence is ideally suited for enclosing estates, schools, churches, cemeteries. Available in standard designs or constructed to architect's specifications.



CYCLONE WINDOW GUARDS

Windows are a frequent and easy source of unauthorized entrance and exit. Rugged Cyclone Window Guards are the best way to protect windows and other small openings.



CYCLONE CHAIN LINK INDUSTRIAL FENCE

An almost impenetrable barrier for use around industrial plants, reservoirs, commercial yards, and wherever intruders must be kept out. Available in various heights, with gates to match.



CYCLONE "RED TAG" LAWN FENCE AND GATES

Home owners like the combination of beauty and protection afforded by Cyclone Lawn Fence. Sturdy construction, heavily galvanized. Welded or woven fabric available in several styles and heights. Attractive, easily operated gates to match.



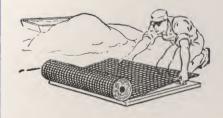
CYCLONE CATCH-ALL BASKETS

Proved themselves to be of real value indoors and out, Ideal rubbish burners and handy receptacles for materials of all kinds. Sturdily built to withstand abuse.



CYCLONE "RED TAG" INSECT WIRE SCREENING

Firm, even mesh, easy to stretch square. Furnished in standard widths and meshes. Galvanized, bronze, or aluminum. Improved new finish, multiple selvage wires.



CYCLONE "RED TAG" HARDWARE CLOTH

Flat welded selvage makes it easy to install. Because of its additional strength, extra heavy coating and uniform weave there are innumerable uses. Available in standard widths and meshes,

